

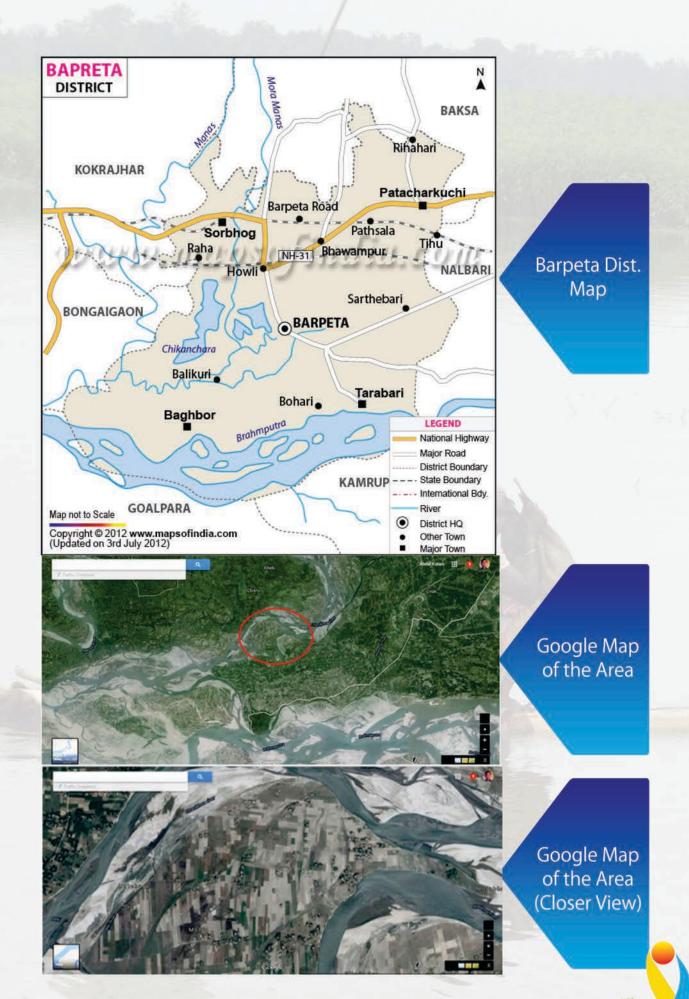
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LIST OF ABBREVIATION

RAP : Rapid Assessment Process

STW : Shallow Tube Well

WASH : Water Sanitation and Hygiene

CRCC : Custer Resource Centre Coordinator

CLP : Char Livelihood Programme

AWC : Anganwadi Centre

C-NES : Centre for North East Studies

NEEPCO : North East Electrical Power Corporation
DFID : Department for International Development

SAP : South Asia Partnership

ASHA : Accredited Social Health Activist

PHC : Primary Health Centre

PHED : Public Health Engineering Department

MDM : Mid Day Meal

MDG : Millennium Development Goal

TET : Teacher's Eligibility Test

UNDP : United Nations Development Programme

WFP : World Food Programme
DRR : Disaster Risk Reduction

ASDMA : Assam State Disaster Management Authority

FGD : Focus Group Discussion
WHO : World Health Organization

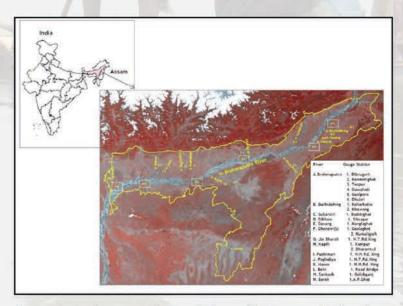
SDO : Sub-divisional Officer

AN OVERVIEW OF ASSAM FLOOD

Assam is one of the most flood prone states in North-Eastern states of India. Flood has almost become an annual event in Assam creating mayhem among the masses. Except two hill districts Karbi Anglong and Dima Hasao, all the plain districts of both Brahmaputra and Barak Valley of Assam are vulnerable to floods in every monsoon starting from May/June to September/October.



The flood water causes huge damage to crops, lives and properties (Mandal, 2010). As far as scale is concerned, the annual flood water from river Brahmaputra and its 28 northern and 18 southern tributaries and river Barak affects 34 of the total number of districts (Phukan, 2005). In 2012, Indian Space Research Organization carried out a study through satellite and remote sensing for extraction of flood disaster food print and assessing the disaster impact in Assam.. The study shows that about 4.65 lakh ha area was submerged, 23 of the 27 districts in Assam had more than 5% of the total geographical area submerged, about 3829 villages marooned and 23.08 lakh people were affected (C. M. Bhatt, G. Srinivasa Rao, Asiya Begum, P. Manjusree, S. V. S. P. Sharma, L. Prasanna and V. Bhanumurthy, 2013).



History says that flood was not so cruel in Assam just half a century ago. Prior to the great earthquake of Assam in 1950, the magnitude of flood was much lesser and people used to welcome the flood (Phukan, 2005). Furthermore, travellers and soldiers who visited Assam in the medieval period wrote about the amazing rivers and awe-inspiring seasonal rains.

Assam's native people used these factors to their advantage in their battles against other

1

armies" (Barbora, 2015). But the things didn't go well as the time passed. Prof. Sanjay Barbora argues that the advent of British colonial role and tea plantation as well as other cash crops changed the landscape of Assam in 19th century. The colonial government built railway track and embankment to protect the tea gardens to protect from waterlogging. Independent government also followed much of the British path and built embankments and dykes with very short-term economic logic in mind, which radically changed the social structure of the place. Thus, construction of embankment for one village creates waterlogged condition in the fields of another (ibid).

Prof. Phukan says flood occurs in Assam as a result of multiple factors like a) natural, b) ecological, and c) anthropomorphic. These factors combined with other climatic factors like depression of Bay of Bengal, high sediment transport, deforestation, shifting cultivation, earthquake, landslide etc are influencing the flood situation in Assam (Phukan, 2005). Apart from short-sighted flood control and development policies, destruction of wetlands is another factor which worsening the flood situation in Assam; the 'Bils' in Brahmaputra Valley and 'Haors' in Barak Valley, which work as natural reservoirs are shrinking drastically. In 1988, total wetland covered area was 49000 ha which has shrunken to mere 35630 ha in 2005 (ibid).

Most recently, the instances of flash flood is increasing in Assam. Last year's flash flood due to cloud burst in Meghalaya's Garo Hills district caused devastation in Goalpara and Kamrup (Rural) districts of Assam. The affected community thinks that the construction of new railway track to Mendipathar has prevented the natural flood water flow from Garo Hills to Brahmaputra and has caused more damage¹. The flash flood in Guwahati city gets much more attention from the media, civil society, politicians and policy makers. Experts say that one of the most important factors behind the flash flood in Guwahati is the mindless human encroachment in the hills, wetlands and water canals (Deka, 2018). Off late administration is working on to evict the illegal encroachment in those natural resources. Another significant matter is the growing number of flash flood due to excess water released by dams. At least one person lost his life while trying to rescue his two brothers in flood water caused by the NEEPCO's released water in North Lakhimpur². Similar allegation is labeled on the Kurichu dam of Bhutan, the excess water released by the dam often creates flood situation in lower Assam³. Moreover, the government is coming up with 167 dams including mega structures in Assam and Arunachal Pradesh

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¹ Interview with Biren Rabha, journalist and community worker based in Krishnai, Goalapra

² NEEPCO dam water floods North Lakhimpur, Assam Tribune, 30th June, 2015

³ The Case of Kurichu in the Indo-Bhutan Context Transboundary Hydropower Projects and Downstream Flooding by Anjana Mahanta. Accessed from

http://www.indiawaterportal.org/sites/indiawaterportal.org/files/kurichu.pdf on 10th July, 2015

which may cause catastrophe to entire downstream civilization. There has been a strong movement in Assam against these dams. The protesters believe that the dam will affect the flow of water of river Brahmaputra, which will impact irrigation in downstream, and increase the danger of sudden floods in an area that is already highly flood-prone (Rehman, undated).

Apart from the damage due to flood water, erosion causes a huge loss to livelihood and properties in Assam during the flood. Prof. Monirul Hussain writes "According to an official report, the river Brahmaputra eroded 4,29,657 hectres of prime agricultural land. Roughly, 7 per cent of the land in the plains has been eroded between 1951 and 2000" (Hussain, 2006). These has displaced a huge chunk of population and forced them to migrate to urban areas and leading a miserable live.

Without talking about the plight char people, the discussion on flood in Assam will remain incomplete. Char is a temporary human settlement in river islands. The height of any char is not greater than the level of highest flood as it is formed by the sand and silt carried by the flood water. Often, the char lands are not cultivable for higher amount of sand in the soil. In Assam 4.6% of its total land belongs to char areas, however out 4.6% only 4% is cultivable and the number of uncultivable land is increasing year after year. Despite, the adversities char areas are one of the most populous rural areas. 9.37% of state's total population lives in 4.6% char land. The population density of char area is as high as 690 per sq.km which is nearly double of the state average (340). Total Fertility Rate (TFR) is as high as 4.6 and literacy rate is as low as 19%. There are end numbers of social evils like illiteracy, child marriage and polygamy are practiced in those char areas. Gorky Chakraborty observed that the char areas represent one of the most backward areas in the state and the char dwellers constantly faced the environmental adversities like flood and erosion and get less that desired attention from the administration in terms of provision of both physical and human infrastructure (Chakraborty, 2014).



OUR INTERVENTION



Char dweller harvesting the partially damaged crops

2.1 Loss Assessment: As per the official release of Assam State Disaster Management Authority (ASDMA) on 13th of June, 2015, more than six hundred villages were submersed and over three lakh people affected in the recent flood. Though officially not reported, at least three persons have died so far in this devastating flood. This is harvesting season in Assam and the flood has destroyed

a huge area of ready to harvest corps, the official figure is 11041.53 hectors. According to the said bulletin, Barpeta district is the worst affected districts in Assam with 247 submerged villages, 2968.82 hectors damaged cropland and over a lakh people affected.

We started our Loss Assessment Process (RAP) in the flood affected char areas from 14th of June, 2015 and continued for two days in Barpeta district. Char areas are generally very prone to flood and erosion due to its very nature of geographic locations as well as non-scientific way of making houses. The plinths of the houses in char areas are very low considering the devastating flood in almost every monsoon. The char people do not raise

the plinth of their houses as it requires more investment and there is no certainty of deadly erosion which may eat away their all investment and labour within couple of hours. The height of char area is never greater than the highest flood (Bhagabati, 2001). As usual the tin roofed hut; often walled with kaisha⁴ were inundated by the flood water. Char people were literally stranded in their



Flood water inundated the floor of a char dweller

⁴ Kaisha is a leafy plant available in char area. It is used to make the wall and sometimes roof of the huts of char dwellers.



houses. Char people in Islampur Rasulpur under Baghbar Revenue Circle were crossing the high current flood water of river Beki, a tributary of Brahmaputra to collect drinking water from other bank of the river, the mainland. In these two chars, major portion of land is not useful for agriculture to sand. The major occupation is animal husbandry; sizeable population migrates to upper

Assam during winter to work in the brick kiln and returns during monsoon and few people do cultivation. The shades made for domesticated animals like cows, goats, buffalos etc went under flood water. Human being was coexisting with animals, earthworm, frogs and lots of insects. The respondents informed that, these plights are nothing new to them, every year flood and erosion. There is no presence of any government machinery found in those two chars. There is no arrangement of basic humanitarian assistance like food, drinking water, medicine etc. Nobody from administration, civil society or even media has visited them to understand the sufferings of the char dweller.

Char villages - Tapajuli Pathar, Mazidbhita, and 4 No. Bhera under Baghbar Revenue Circle of Barpeta district are a bit older char. Thes Chars have primary schools in each village. Cultivation and animal husbandry are the prime occupation. However, a good number of people migrate to urban areas as well as brick kiln fields in search of livelihood.

22 years old Hafijur Rahman Khan and many other youths from these char go far away cities like Bangalore to work in construction and other unorganized sector. Although, agriculture has been the prime source of livelihood for most of the char dwellers in these three char villages. Recent flood has destroyed their stable food crop like paddy, (mostly traditional ayosh), cash crops like jute and sesame and horticulture of brinjal,



A marginal farmer showing the germinated paddy



One farmer showing the damaged brinjal

ladies finger, lemon, chilly etc. Some of the affected char people reported loss of livestock and drastic decline in milk production. During monsoon the river widens and the milk producers often couldn't reach the market. This year too they lose market due to flood water.

The flood has not only affected the people of char areas of Assam, but also the people living in mainland

plain areas. This year's first phase of flood occurred during the pick of harvesting time, especially in lower Assam. Since 90s, the farmers are using diesel run shallow tube well (STW) based irrigation system (Mandal, 2010). The farmers are using high yielding variety of seeds and fertilizers to increase their production. In one hand they are incurring higher cost on the other hand paddy cultivation in many areas has become mono-cropping. Which has resulted more loss in the recent flood as many of the farmers couldn't reap their crops; on the other hand, who reaped couldn't dry up due heavy rain and germinated. The flood also affected many marginal farmers who cultivated fish on their ponds as Barpeta is one of the highest fish producing districts in Assam.

As far as damage of infrastructure is concerned, some houses are damaged, silt and mud has partially damaged many houses. All the three school compounds were inundated by the flood water and silt. In the fives char villages which we assessed do not have any

roads or streets at all, hence there is no question of damage. The worst affected thing in the char areas are the latrines. There is a single sanitary toilet in any of the char villages we studied. The flood washed water has away or damaged almost all the kuccha toilets. A few women informed that during pick of flood, they used to go away from their house on the raft and defecated on water!



Flood water inundated the school premise



Sometimes used plastic bags or banana leafs if couldn't go outside. It was horrible to learn that people drank the same water during flood as the tube-wells were also under water.

2.2 Liaising with Stakeholders: After taking stock of the devastation and human suffering, we immediately communicated the same to appropriate government authority as well as other stakeholders. We sought their support and cooperation to help the flood affected people. Here is a brief note on the responses we received:

2.2.1 District Administration: On 12th of June, 2015, we communicated with the Circle Officer of Baghbar Revenue Circle Mr. Kamal Baruah over phone and conveyed the information we were getting from the char areas of Barpeta district under his jurisdiction. Later on, after doing the assessment, we sent him photographs and requested him to visit the affected area as well as provide necessary relief and rehabilitation to the flood victims. However, no action has been taken.

2.2.2 Joint Directorate – Health Services, Barpeta: While distributing the gratuitous relief items among the flood victims we came across number of health issues, mostly water borne diseases. We approached Joint Director of Health Services, Barpeta Dr. Subrata Sarma for necessary medicine and medical items to conduct health camps in the flood affected char areas. Mr. Sarma quickly processed our application. District Drug Store Manager Mr. Pathak also took the issue seriously and provided the available medicine and medical items. We requested for 66 items of medicine and medical items and we were provided 38 items. Remaining items were bought from open market. Dr. Emdad Hussain, Medical Officer of Baghbar Primary Health Centre conducted the camps in the char areas. Dr. Emdad Hussain, a young, energetic and committed medical professional stayed overnight in the char with our volunteers.

2.2.3 Block Malaria Office: As per the suggestion of Dr, Emdad Hussain, we approached the Block Malaria Office, situated at Mandia Primary Health Centre (PHC)

(Now being upgraded to 40 bedded hospital). We requested the concerned officer Mr. Sahanoor to provide malaria test kits and medicine for malaria treatment. It was horrible experience to visit his office. The office was almost covered by cob webs, many medical of equipment were laying on the corridor along with cow dung. It seems the office has not been open since years. The toilet attached to the office is filled with official papers and register like things. Anyway Mr. Sahanoor provided us only malaria testing kit and informed that medicine is not available to him. While conducting the health camps, we came across a number of cases with high fever and conducted rapid test. Shockingly, all the cases were reported positive! We communicated with Mr. Sahanoor and conveyed him the result and asked him to provide necessary medical treatment to the patients. Conveniently, he replied that the malaria test kits might be damaged and thus showing positive results, nothing to worry! We requested the Block Malaria Officer Mr. Dildar Rezza to send the concerned Surveillance Officer to conduct retest. Next day morning Mr. Rezza arrived himself with other two malaria workers, however, the concerned Surveillance Officer couldn't reach the char till 3:00pm and informed that he has lost route! 22 cases fever cases were tested and retested by Mr. Rezza and thankfully all the cases were reported negative.

2.2.4 Public Health Engineering Department (PHED): We have mentioned earlier that drinking water is a huge issue in the flood affected char areas. We had to provide 20 chlorine tablets (Water purifying tablet) per family, which can purify 400 litres of water. In middle of our intervention, the stock of our chlorine tablet got exhausted. We rushed to the Office of Executive Engineer of PHED, Barpeta and requested the same. Surprisingly, the Executive Engineer refused to meet us and SDO asked us to get registered with the department to get any tablet! After repeated request through some lower ranked officers, the Executive Engineer instructed provide 400 tablets which can purify 4000 litres water i.e. for 10 families!

2.2.5 Jalavikshan: Jalavikshan is private water testing organization based in Guwajati. They provided us remaining required chlorine tablets for the flood affected people of char areas. The Associate Consultant of Jalavikshan Mr. Nriprendra Sarma provided technical guidance and helped to us to conduct awareness on post flood health issues and WASH related issues.



2.3 Relief and Humanitarian Assistance: The char people remained stranded in the flood water without basic human needs food, drinking water, health services and decent shelter. We provided gratuitous relief to around 300 worst affected and poorest of the poor families of five char villages i.e. Mazidbhita, 4 No. Bhera, Tapajuli Pathar, Rasulpur and Islampur. The general relief included rice, pulse,



Victim receiving the relief materials after flood

mustered oil and salt for a week for an average five member family. Considering the emergency situation, dry food items like biscuit, flattened rice and sugar were also provided. Children are one of the worst affected groups during any disaster situations. Keeping in mind their suffering Amulspray was given only to the children (Provided to a certain age group and the parents were thoroughly briefed about the feeding process). Apart from food items we also provided soap and water purifying tablets to the affected families.

2.4 Psychosocial Care: Every disaster be it natural calamity or manmade disaster, it affects the victims and survivors both physically and mentally. The mental suffering is not at all less painful than the physical or material one. Therefore, the person or group of persons who are exposed to disaster need mental care and support to cope up with the mental trauma and changing state of affairs. World Health Organization says that the people in distress need humane, supportive and practical help to overcome their



Our volunteer with the flood affected kids

suffering. The WHO defines this support as Psychological First Aid, which not only psychological affairs but also the social. It includes providing support practical and care, assessing the needs and concerns, helping the people to meet their basic needs, connecting them to information, services and social support and protecting them from further harm. WHO further says

that to provide all these support and care one need not be a certified professional counsellor or psychiatric and this is not psychological debriefing (WHO, 2011). The history of Psychosocial Care is not so old. Psychosocial consequences were never taken seriously in relief and rehabilitation process. Long term study of psychosocial problems after the Bhopal Gas Tragedy helped to start



the gradual acceptance of need of psychosocial care. For the first time, psychosocial care was implemented by community level workers during the super cyclone in Orissa. The intervention had demonstrated the nature of the needs of vulnerable groups, the possibility of community level workers to provide care and the effectiveness of such care. The experience in Orissa actually established a new approach to psychosocial care (Action Aid, Oxfam India, NIMHANS, 2002). Extraordinary works done by Aman Sumaday, Aman Biradari etc under the leadership of people like Harsh Mander and Prof. R Srinivasa Murthy has popularised the concept and we are implementing it in our every intervention during any disaster and humanitarian crisis situation.

We are implanting the same in case our relief work in the flood affected char areas of Barpeta district. Our volunteers visited every flood affected households in those detached human settlement in char areas, talked to the victims, listened to their plight and suffering. The victims were assured that our intervention is not limited to providing temporary relief



be with them in the hour of distress and suffering and try to minimise it by every possible means. Our volunteers also deployed every effort to convince that the relief and other support provided to them is out of mere sympathy, rather we believe that as fellow human being it is our obligation to share their suffering.

works, rather, we are committed to

Apart from the mental support to bring them back to normalcy, we studied the issues like health care, how to restore the education system, how cope the crop loss etc in a participatory manner. We conducted group meetings with the victims, took decisions and took action (some are continuing). Health Camps, Focus Group Discussion (FGD) with teachers CRCCs, workshop on WASH and post flood health issues were some of outcomes of such group meetings.

2.5 Awareness on WASH and Post-Flood Health Hazards: UN Secretary-General,

Ban Ki-moon said "Safe drinking water and adequate sanitation are crucial for poverty reduction, sustainable crucial for development, and crucial for achieving any and every one of the Millennium Development Goals". But the situation in char areas of Assam in appalling, woeful! A study conducted by Manoj Goswami with a sample of 1000 households of speared over four development



Our volunteer doing a session on WASH after flood

blocks in Barpeta and Kamrup district revealed that 91% of char dwellers do not have access to pure drinking water and only 1.4% char households have sanitary latrine (Chakraborty, 2014). Our field study and assessment also substantiated such a dismal situation in the flood affected char area.

Our trained volunteer Rashidul Islam (Trained in "Public Health in Emergency") conducted



A scene from Medical Camp in char area after flood

workshops with the flood affected people of char areas on the issues of water, sanitation and hygiene. Dr. Emdad Hussain also conducted sessions with the flood victims. Our volunteers went to every flood affected household of those chars and demonstrated and distributed chlorine tablet.

2.6 Health Services: Public health in char area is another big

problem. Due to inaccessibility and poor transportation and communication, the state-sponsored health interventions are not reaching the char people. There is not a single health centre among the three char villages of Tapajuli Pathar, Mazidbhita and 4 No. Bhera. In case of medical emergency char people needs to cross river Beki and visit primary health centre in Balikuri which take almost of the day. The ASHA (Accredited Social Health Activist) informed that due to poor communication and transportation hardly any pregnant woman goes for institutional delivery. Almost all the delivery is conducted by the traditional *dhai* in home itself. The annual flood worsens situation to a great extend.

During our field study and relief works we came across a number of water borne and post flood health complexities and decided to intervene. We conducted several health camps in those chars. There were number of patients who were unable to come to the designated health camps. Our doctor and other medical professionals visited them in their houses and provided necessary medical helps. One of them was Iman Ali (55), he was suffering from water borne diseases nearly for a week and was bed ridden without any medical help. Our doctor visited him at his place and administered necessary medical treatment. Next day morning Mr. Ali woke up, walked to our boat and thanked the team for saving his life. Many of the char people said that, they were seeing any MBBS doctor for the first time in their entire life. Nearly five hundred patients were provided primary medical care with 66 items of medicine and allied medical items. Out of 66 items 38 items were provided free of cost from Joint Director of Health Services, Barpeta, remaining were purchased from the open market.

The malaria control team also joined our medical and emergency team on the second day and tested 22 fever cases and provided required medicine. It is worthy to mention here that the malaria control officials visited and provided medical care to the flood affected people of those char areas for the first time, that too after repeated request and follow up.

INTERVENTION REQUIRED

- **3.1 Short Term Intervention:** Our works with the flood victims were just emergency and humanitarian support to ease their suffering to some extent. Some immediate intervention required from the government and other stakeholders to help them to cope up with the losses due to this year's devastating flood. Some of those most pressing needs are identified as bellow:
- **3.1.1 Restoration of Education System:** All the three char villages i.e. Tapajuli Pathar, Mazidbhita and 4 No. Bhera has one primary school each. 411 No. Alipur Lower Primary School in Tapajuli Pathar was established by British in 1945. However, for the last two years the Head Teacher is not attending her duty. The Custer Resource Centre Coordinator informed that he has complained many times but nothing materialized. Similar statement is given by the parents of the students. On the other hand the TET teacher has also stopped coming to school since the beginning of monsoon. The conditions of other two schools are also alike. Mid-Day-Meal (MDM) scheme is not being implemented in any schools. There was an Anganwadi Centre in the char, which has been shifted to other bank of river Beki for the convenience of the AWC worker. Nearly, two hundred kids are being deprived from the facilities of AWC. Education system needs immediate attention from the district administration as well as civil society organizations. These institutions need immediate attention to restore their function.
- **3.1.2 Compensation and Rehabilitation:** We have already mentioned that the farmers of these three char villages have lost huge portion of their agricultural produce due to flood. Paddy, jute, sesame, brinjal and other horticulture have been damaged by the flood water. Proper compensation and rehabilitation is required to cope up their losses. So far the district administration not taken any such steps to rehabilitated the flood victims of these char villages despite the loss is enormous. It is felt necessary to mention that in 2012, these char villages were devastated in hailstorm. District administration approved compensation and prepared the list of beneficiaries. When we enquired, it was shocking to know that the money has been disbursed but not a single penny is received by the beneficiary. The poor victims are still holding the list and hoping that they will get the compensation. Who knows, rehabilitation grant might be siphoned this time also. Administration and civil society need to remain alert.
- **3.1.3 Health Services:** The condition of public health system in char area is worst. National Health Mission and Centre for North East Studies (C-NES) is running an innovative health care model called 'Boat Clinic" in the char areas of Assam. Under

Mandia PHC one such unit is working. However, unfortunately, the Boat Clinic has never visited those three chars since its inception. The Joint Director Health Services and the officials of Boat Clinic should ensure that the char people of those three chars receive health services from Boat Clinic at least once in a week.

3.2 Long Term Intervention: As far as long term intervention is concerned, government and other stakeholders should think seriously about the vulnerability and risk of the char people towards disaster, especially flood and erosion. The socio-economic conditions of the char people is worst compare any other social group in Assam. Most of the state sponsored poverty alleviation, social security and development schemes and programmes are defunct in the char areas of Assam. Moreover, there is a char development board, on paper which is working for the development of char area and char people but in reality expect sponsoring few students for skill development no other activities are seen on the ground. We haven't observed any scientific and holistic programme from government as well as non-government sector for the upliftment of char people.

It is true that development in char area is a challenging task due to its hostile geographical attributes and social constraints; however it is not something impossible. There are ample examples and fascinating stories on char development. If we take the example of char areas of Bangladesh, the international organizations like South Asia Partnership (SAP), Department for International Development (DFID), Practical Action, Plan International, United Nations Development Programme (UNDP), World Food Programme (WFP) etc are working in chars of Bangladesh. The government of Bangladesh and non-government organisations (NGOs) have been facilitating those international development organizations and as a result now the char people in Bangladesh have a better disaster preparedness and disaster risk reduction (DRR), as well as better human development and accelerated economic growth.

Based on our understanding of chars in Assam, we think DFID's Char Development Programme (CLP) can be replicated with minor changes. CLP is one the best performing char development programme in Bangladesh which is working for economic independence, social integrity and mobility to resist poverty and build resilience to climate change and disaster. The CLP programme has components like infrastructure development i.e. raised plinth for house, shallow tube well and sanitary latrine, community based infrastructure like roads, platforms, schools, graveyards etc. In case of livelihood development, the programme has asset transfer, homestead garden, decompose shed for organic fertilizer, training, capacity building and skill development for livelihoods. The

programme's human development activities consists four components i.e. social development, health, education and savings.

We believe these interventions can bring positive change in the chars as well as can lessen disaster risks.

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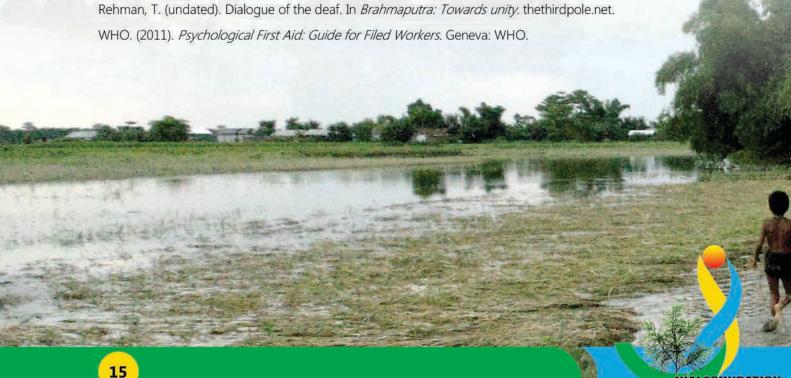
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